



Intel[®] 4 Series Chipsets Chipset Family

Specification Update

For the Intel[®] 82G45, 82G43 Graphics and Memory Controller Hub (GMCH) and the Intel[®] 82P45, 82P43 Memory Controller Hub (MCH)

June 2008



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The Intel® 4 Series Chipsets Chipset Family may contain design defects or errors known as errata which may cause the product to deviate from published specifications. Current characterized errata are available on request.

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Revision History

Revision	Description	Date
-001	• Initial release	June 2008

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Preface

This document is an update to the specifications contained in the documents listed in the following Affected Documents/Related Documents table. It is a compilation of device and document errata and specification clarifications and changes, and is intended for hardware system manufacturers and for software developers of applications, operating system, and tools.

Information types defined in the Nomenclature section of this document are consolidated into this update document and are no longer published in other documents. This document may also contain information that has not been previously published.

Affected Documents

Document Title	Document Number/Location
Intel® 4 Series Chipsets Chipset Family Datasheet	319970-001

Nomenclature

Errata are design defects or errors. Errata may cause the Intel 4 Series Chipset (G)MCH's behavior to deviate from published specifications. Hardware and software designed to be used with any given stepping must assume that all errata documented for that stepping are present on all devices.

Specification Changes are modifications to the current published specifications. These changes will be incorporated in the next release of the specifications.

Specification Clarifications describe a specification in greater detail or further highlight a specification's impact to a complex design situation. These clarifications will be incorporated in the next release of the specifications.

Documentation Changes include typos, errors, or omissions from the current published specifications. These changes will be incorporated in the next release of the specifications.

Note: Errata remain in the specification update throughout the product's lifecycle, or until a particular stepping is no longer commercially available. Under these circumstances, errata removed from the specification update are archived and available upon request. Specification changes, specification clarifications and documentation changes are removed from the specification update when the appropriate changes are made to the appropriate product specification or user documentation (datasheets, manuals, etc.).



Summary Tables of Changes

The following table indicates the Specification Changes, Errata, Specification Clarifications or Documentation Changes, which apply to the listed (G)MCH steppings. Intel intends to fix some of the errata in a future stepping of the component, and to account for the other outstanding issues through documentation or Specification Changes as noted. This table uses the following notations:

Codes Used in Summary Table

Stepping

- X: Erratum, Specification Change or Clarification that applies to this stepping.
- (No mark) or (Blank Box): This erratum is fixed in listed stepping or specification change does not apply to listed stepping.

Status

- Doc: Document change or update that will be implemented.
- PlanFix: This erratum may be fixed in a future stepping of the product.
- Fixed: This erratum has been previously fixed.
- NoFix: There are no plans to fix this erratum.

Row

- Shaded: This item is either new or modified from the previous version of the document.

NO.	A2	PLANS	ERRATA
			There are no Errata in this revision of the specification update

NO.	SPECIFICATION CHANGES
	There are no Specification Changes in this revision of the specification update



NO.	SPECIFICATION CLARIFICATIONS
	There are no Specification Clarifications in this revision of the specification update

NO.	DOCUMENTATION CHANGES
	There are no Documentation Changes in this revision of the specification update

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Identification Information

Component Identification via Programming Interface

The Intel 4 Series Chipset (G)MCH may be identified by the following register contents:

Stepping	Vendor ID ¹	Device ID ²	Revision Number ³
A2	8086h	2E20h	02h
A3	8086	2E20h	03h

NOTES:

1. The Vendor ID corresponds to bits 15:0 of the Vendor ID Register located at offset 00–01h in the PCI function 0 configuration space.
2. The Device ID corresponds to bits 15:0 of the Device ID Register located at offset 02–03h in the PCI function 0 configuration space.
3. The Revision Number corresponds to bits 7:0 of the Revision ID Register located at offset 08h in the PCI function 0 configuration space.

Component Marking Information

The Intel 4 Series Chipset (G)MCH may be identified by the following component markings:

Stepping	Product	S-Spec	Lead/ PbFree	Top Marking	Notes
A2	MCH	SLB7Z	PbFree	AC82P45	82P45 MCH
A2	MCH	SLB83	PbFree	AC82P43	82P43 MCH
A3	GMCH	SLB84	PbFree	AC82G45	82G45 GMCH
A3	GMCH	SLB85	PbFree	AC82G43	82G43 GMCH



Intel® 4 Series Chipset Family Component Matrix

Feature			Component			
			82G45	82G43	82P45	82P43
FSB Support	1333 MHz		•	•	•	•
	1067 MHz		•	•	•	•
	800 MHz		•	•	•	•
Memory Support	DIMMS Per Channel		2	1	2	2
	DDR3	1067	•	•	•	•
		800	•	•	•	•
	DDR2	800	•	•	•	•
		667	•	•	•	•
ICH Support	Intel ICH10		•	•	•	•
	Intel ICH10R		•	•	•	•
Discrete GFX	PCIe* Gen 2 1x16		•	•	•	•
	PCIe Gen 2 2x8				•	
	PCIe Gen 1 1x16		•	•	•	•
	PCIe Gen 1 2x8				•	
Integrated GFX	5 th Generation Core		•	•	NA	
	DirectX 10		•	•		
	OpenGL 2.0		•	•		
	Intel Clear Video Technology		•	•		
	Dual Independent Display		•	•		
	ADD2/MEC		•	•		
	HDMI* 1.3		•	•		
	DVI*		•	•		
	DisplayPort*		•	•		
	Integrated HDCP		•	•		
	PAVP		•	•		
	VGA*		•	•		
	Full HW decode acceleration of MPEG2, VC1 and AVC		•			
Platform Technologies	Intel® Remote Wake Technology (Intel® RWT)		•	•	•	•
	ASF		•	•	•	•
	Intel QST		•	•	•	•

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Errata

There are no Errata in this revision of the specification update.

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Specification Change

There are no Specification Changes in this Specification Update revision.

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Specification Clarifications

There are no specification clarifications in this Specification Update revision.

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Documentation Changes

There are no Documentation Changes in this Specification Update revision.

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